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ABSTRACT

This digest describes datasets of the National Center for Education Statistics (NCES) that are related to rural education, discusses potential uses of NCES data, and offers practical tips for accessing these data. NCES has primarily two types of data; population data on the school universe and national surveys. Two population databases are the Common Core of Data, which describes all U.S. public elementary and secondary schools and school districts, and the School District Data Book, which provides comprehensive data on school districts and communities and links sociodemographic complexities to schooling. NCES longitudinal surveys that follow cohorts of middle-school and high-school students for 10-14 years include the National Longitudinal Survey (beginning in 1972), the High School and Beyond Survey (beginning in 1980), and the National Education Longitudinal Survey of 1988. Cross-sectional surveys include the School and Staffing Survey, conducted every 3 years; the National Assessment of Educational Progress, collecting information on student performance for over 25 years; and the National Household Education Survey (1991). NCES data have a variety of uses in program planning and design, policy making (although rural-specific policy issues are inadequately covered), and scholarly research. NCES datasets use several measures of rurality; researchers are advised to check that the dataset used contains a suitable locale measure. Other suggestions for researchers include taking advantage of CD-ROM technology, obtaining customized datasets and tabulations from NCES, and attending NCES seminars. (SV)



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Information collected specifically on rural education is scant (Haas, 1992; Stern, 1994). However, the National Center for Education Statistics (NCES) recently geared up its efforts to disseminate data and products on elementary and secondary education that contain measures of community urbanicity, making rural-urban comparisons or rural-focused analyses possible (Stephens, 1992). This digest describes NCES datasets, presents issues that can be addressed with NCES data, and offers practical tips for accessing these data.

NCES has primarily two types of data: population data and survey data. Population data cover the nation's school universe and provide descriptive information. Survey data do not actually cover the national population, but can yield estimates from nationally representative samples of schools or students. Most NCES surveys are conducted by questionnaire (some with supplementary telephone or personal interviews) using stratified probability samples. Driven by specific policy issues, surveys collect detailed and dynamic information.

Population Data

The *Common Core of Data (CCD)* covers all public elementary and secondary schools as well as local and state education agencies. Information collected by CCD includes descriptive data on schools and districts (name, address, phone number, and locale); demographic data on students and staff; and fiscal data (revenues and current expenditures). CCD is a major source for identifying and describing public elementary and secondary schools and school districts in the U.S.

The *School District Data Book (SDDB)* provides the most comprehensive data on the universe of school districts and communities (Heriot, 1992). Installed in a set of CD-ROMs, SDDB incorporates the Census Bureau's 1990 decennial data with data from NCES's CCD and School and Staffing Survey (described below). SDDB can (1) provide education and demographic profiles of the nation, states, counties, and school districts; (2) tabulate a variety of statistics at the levels of the census geographies, household, and the child; and (3) display thematic maps of educational and demographic conditions of the nation, states, counties, and districts, allowing users to display data they themselves have manipulated. SDDB will be useful for both research and program planning in rural education since it links sociodemographic complexities to schooling.

Survey Data—Longitudinal Studies

NCES longitudinal surveys follow the same sample of respondents across a period of years to see how education processes evolve. The three projects described below are similar in sampling design, data collection procedures, and measurement. They all include multiple files with data gathered from students, teachers, schools, and parents, but reflect changes in substantive concerns. Together, they provide opportunities for understanding the life course of American youth in three decades, taking into account a host of individual, family, and school processes (NCES, in press).

The *National Longitudinal Survey (NLS72)* contains information on a nationally representative sample of 12th graders enrolled in the 1971-72 school year, with four follow-ups to 1986. The main focus is the school-to-work transition.

The *High School and Beyond Survey (HS&B)* began in 1980 and has followed a senior cohort through 1986 and a sophomore cohort through 1992. Data from the study supports the study of high school experiences and the subsequent life course followed by respondents. It addressed issues arising in the 1980s such as declining test scores, climbing dropout rates, the goals of vocational education, and access to post-secondary education.

The *National Education Longitudinal Study of 1988 (NELS:88)* is an ongoing project that builds upon existing knowledge about the impact of middle school and high school educational achievement by following students beginning in eighth grade. Starting with the 1988 base year survey of eighth grade students, NELS:88 completed the third follow-up survey in 1994 using refined sampling strategies, and will continue to follow this cohort through 1998.

Survey Data—Cross-sectional Studies

Cross-sectional surveys study different samples or cohorts to examine the conditions at a given time.

The *School and Staffing Survey (SASS)* was conducted during the 1987-88 and 1990-91 school years, and will be conducted every three years in the future. Collecting information on schools, districts, and administrators, SASS is the most comprehensive database for studying the work force of teachers and administrators in both public and private schools.

The *National Assessment of Educational Progress (NAEP)* is a congressionally mandated project that has collected and reported information for over 25 years on what American students know and can do. NAEP provides objective data on student performance at national and regional levels in reading, mathematics, science, writing, citizenship, U.S. history, geography, social studies, art, music, literature, computer competence, and career and occupational development.

The *National Household Education Survey (NHES)* is NCES's only household survey. The 1991 NHES focuses on the utilization and the condition of child care services and adult education participation. Data were collected by conducting telephone interviews of a national sample of households. The 1993 project looks at the issues of school readiness and school safety/discipline. Surveys are also planned for 1995 and 1996.

Using NCES Data in Program Planning

In designing a program, planners need to look at local strengths and weaknesses compared to other communities. NCES's school population data can fulfill such needs. SDDB allows comparisons between a given district to other districts in the state or in the nation in specified aspects of demography and education. It enables elaborate but easy-to-operate analysis because of the comprehensiveness of the data and the flexibility in data manipulation (e.g., breaking down data by characteristics of children, parents, households, and school districts to produce profiles, tables, and maps). The results

may help formulate plans to meet local needs and convince stakeholders to support particular projects. A concern in regard to such local application is the currency of the decennial census data. Since the 1990 census will not be updated until 2000, the reality in areas with highly mobile demography may soon differ from that portrayed by SDDDB.

CCD can serve some of these functions, though the data elements are more narrowly focused. Annually updated, CCD is useful for descriptive and analytic studies of schools and school districts. It is also an authority source for sampling at the national and local levels for marketing, polling, and survey research.

Besides population data, some surveys (SASS, NAEP, NHES) also can serve for local planning because (1) they produce reasonably good estimates of regional or local conditions and (2) they are conducted periodically to generate timely information.

Using NCES Data in Policy-making

Policy-making requires knowledge about program effectiveness and local needs for resources, incentives, and technical assistance. NCES data can address, under the rubric of school effectiveness, issues such as rural-urban differences in operation and performance; rural school financial conditions; course offering and taking; and working conditions of rural administrators and teachers and their consequences to student outcomes.

While population data such as SDDDB can tell some on these issues, more dynamic information is available from survey projects such as SASS, whose sampling design allows rural-urban comparisons in particular states, regions, and the nation as a whole. NAEP is another source for investigating the effectiveness issue in urban and rural education. The power of NAEP is its continuity and extensive coverage of performance data, which yield great potential for trend analysis. But its complexities in sampling and measurement may be a challenge.

Inadequate coverage of rural-specific policy issues by NCES datasets is a difficulty facing rural policy research. School consolidation, an issue with high stakes to policymaking and local community life, has evoked ongoing debate in many rural communities (Hobbs, 1991). Yet, NCES datasets do not contain information on the history or processes of school consolidation. Another unaddressed rural issue is local components in curriculum. Community-based school programs such as Foxfire are said to benefit students and rural communities by cultivating meanings of rural life (Wigginton, 1985; Theobald, 1992). Increasingly, rural schools are incorporating the approach into their programs (Hobbs, 1991; Stern, 1994). However, systematic studies of such programs' effectiveness are impossible with NCES datasets because they have not yet gathered information about innovative rural-specific curricula.

Using NCES Data in Scholarly Research

Scholarly research tries to understand education processes in a more general sense, resulting in findings that may or may not have direct implications for current policy issues. For instance, a dilemma in rural education interesting to researchers is that while rural communities badly need an educated population and have limited resources for education, schools continue to train students in urban-oriented skills, thus encouraging students to leave the rural community (DeYoung, 1990). It is unclear what educational programs—academic or occupational—contribute more to fostering community attachment among rural youth. Using HS&B data, it is possible to trace school curriculum offerings and student course-taking and to link these measures to students' post-school mobility. Importantly, HS&B provides local labor market indicators that are critical factors for such analyses.

Practical Suggestions for Using NCES Resources

Rural-urban locale differentiation. The definition of *rural* continues to evoke discussion in rural education circles. While all NCES datasets provide measures of locale, some involve refined categorization, such as the NCES locale scheme that takes into account population density and size and distance to metropolitan centers (used in SASS). Others have simplistic distinctions such as a dichotomy of metropolitan versus nonmetropolitan areas (e.g., NHES). Analysts should make sure that the dataset contains a suitable locale measure.

CD-ROM and related techniques. CD-ROM technology stores vast amounts of information on small disks to provide easy access. NCES's electronic code books enable quick review and extraction of variables contained in different data files. It is a great advantage to have a CD-ROM drive on your computer.

Getting what you need from the bureaucracy. The National Data Resource Center, sponsored by NCES, provides customized data sets and tabulations as requested, free of charge. The contact person is Carl Schmitt (202/219-1642). You can also access the U.S. Department of Education's Internet Gopher server (gopher.ed.gov) or World Wide Web homepage (<http://www.ed.gov>) to review NCES data products and access some data files; or send your request via E-mail (ndrc@inet.ed.gov). Other suggestions:

- Call the Data Resource Center to sign onto its mailing list to get updated information about NCES projects.
- Define your data needs as precisely as possible. If your needs are specific and straightforward, simply call the Data Resource Center and make your requests; if you need to analyze data yourself, call the specific staff members who know the most about a particular project and discuss your needs with them.
- If you need to use NCES data regularly, attend an NCES seminar.
- Try to access data through the telecommunications network, which is becoming increasingly efficient and easy to use.

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